

REMARKS

Claims 5-8, 14-15, and 17-26 are pending in the application. Claims 5-7 have been amended and claims 17-26 are newly-added to the application. No new matter has been introduced by the amendment.

Rejection Under 35 U.S.C. § 102(b)

Claims 5-8 and 14-15 have been rejected over Fisanick et al. This rejection is believed overcome in view of the amendment and remarks presented herein.

Claim 5, as amended, recites a process for repairing a metallic pattern on a substrate that includes applying a metallic organic compound and subjecting the metallic organic compound to a provisional and to a main baking process using a laser. In the provisional baking process, the output of a laser is increased from about zero to a first predetermined value. The output of a laser is held at the first predetermined value for a predetermined time. During the provisional baking process, solvent contained in the metal-organic compound is dissipated. In the main baking process, the output of a laser is increased to a second predetermined value. The laser output is held at the second predetermined value for a predetermined time. During the main baking process, metallic components are deposited.

The applicants respectfully assert that claim 5 distinguishes over Fisanick et al. at least because Fisanick et al. do not describe the claim two-stage laser baking process.

Claim 6 depends from claim 5 and, as amended, adds the further limitations that the laser comprise a semiconductor laser that outputs infrared energy to bake the metallic organic compound.

Claim 7 depends from claim 6 and, as amended, specifies that the process further comprises cooling the substrate after baking metallic organic compound.

Claim 8 depends from claim 5 and adds the further processing step of removing a protruding portion of the deposited metallic thin film from the metallic pattern.

Claim 14 depends from claim 6 and adds the further limitation of removing a portion of the deposited metallic thin film from the metallic pattern.

Claim 15 depends from claim 7 and adds the further limitation of removing a portion of the deposited metallic thin film protruding from the metallic pattern.

Claim 17 depends from claim 15 and specifies the first predetermined time to be about 24 seconds.

Claim 18 depends from claim 17 and adds the further limitation that the provisional baking process include an intermediate value in which the output of the laser is held for a predetermined time. The intermediate value is less than the first predetermined value.

Claim 19 depends from claim 18 and specifies the predetermined time for holding at the intermediate value to be about 16 seconds.

Claim 20 depends from claim 5 and recites that the metallic thin film has a portion that protrudes from the metallic pattern and that the protruding portion is trimmed away by applying a laser.

Claim 21 depends from claim 20 and specifies that applying a laser comprised of applying a YAG laser.

Claim 22 depends from claim 20 and specifies that the substrate comprise a glass mask.

Claim 23 is a new independent claim and recites a method for preparing a metallic pattern on a substrate. The method includes providing a transfer probe and a face plate and pressing the transfer probe into the face plate. A predetermined amount of metal-organic compound is transferred from the base plate to the transfer probe. The transfer probe is moved to a substrate and the predetermined amount of metallic organic compound is transferred to a defect in a metallic pattern overlying the substrate. The metallic organic compound is subjected to a provisional and main baking process using a laser to deposit a metallic thin film in the defect. The baking process includes a provisional baking process and a main baking process. In the provisional baking process the output laser is increased from about zero to a first predetermined value and held at the first predetermined value for a predetermined time. In the main baking process, the laser output is increased to a second predetermined value and held at the second predetermined value for a second predetermined time.

Claim 24 depends from claim 23 and recites a procedure for providing a paste plate.

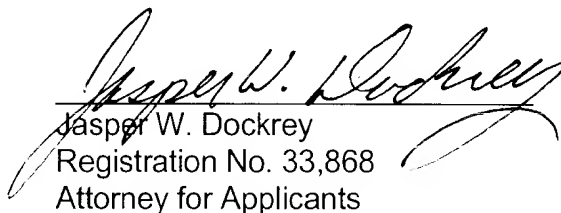
Claim 25 depends from claim 23 and specifies that providing a transfer probe comprises providing a beryllium copper probe having a flattened tip end.

Claim 26 depends from claim 23 and recites a process for locating defects in the metallic pattern.

The applicants respectfully assert that their pending claims distinguish over Fisanick et al. by reciting subject matter not suggested or disclosed by Fisanick et al. In response to the Examiner's remarks appearing at page 3 of the instant office action, the applicants respectfully assert that the disclosed ramping process does not anticipate the applicants' laser baking process that includes a provisional baking process and a main baking process as recited in the applicants' pending claims.

The applicants have made a novel and non-obvious contribution to the art of repair metallic patterns on substrates. Their pending claims distinguish over the cited reference and are believed to be in condition for allowance. Accordingly, such allowance is now earnestly requested.

Respectfully submitted,


Jasper W. Dockrey
Registration No. 33,868
Attorney for Applicants

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, ILLINOIS 60610
(312) 321-4200